Public Notice

US Army Corps of Engineers
Huntington District

In reply refer to:
Public Notice No. 200400008
Stream:

Issuance Date:
January 30, 2004

Expiration Date:
February 29, 2004

Address comments to:
US Army Corps of Engineers, Huntington District
502 Eighth Street
ATTN: CELRH-F
Huntington, West Virginia 25701-2070

Request for Comments on Proposed Mitigation Guidelines and Requirements for the Huntington District

The U.S. Army Corps of Engineers, Huntington District, has prepared the attached guidelines as part of the National Mitigation Action Plan to improve the success of compensatory mitigation on a nationwide basis and to provide a measure of consistency in mitigation requirements and policy for the regulated community. It should be noted these compensatory mitigation guidelines are being developed as a technical guide, and are intended to clarify provisions within existing authorities and do not establish new requirements. These guidelines are to be used in conjunction with the national Mitigation Plan Checklist and Supplement, the national guidance entitled "Incorporating the National Research Council's Mitigation Guidelines Into the Clean Water Act Section 404 Program" and the Regulatory Guidance Letter 02-02.

Compensatory mitigation is not a substitute for compliance with the Memorandum of Agreement (MOA) between the Environmental Protection Agency and the Department of the Army concerning mitigation considered under Section 404 of the Clean Water Act (33 CFR Part 1344). The 404(b)(1) Guidelines allow permit issuance for only the least environmentally damaging practicable alternative. The 404(b)(1) Guidelines state that no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem so long as the alternative does not have other significant adverse environmental consequences. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics. The burden to demonstrate compliance with the 404(b)(1) Guidelines rests with the permit applicant. For non-water dependent discharges into special aquatic sites (e.g. wetlands), there is a presumption that less environmentally damaging practicable alternative exists. If the applicant has complied with the 404(b)(1) Guidelines through first evaluating alternatives to avoid impacts, and then taken appropriate and practicable steps to minimize adverse impacts to the maximum extent practicable, then reasonable and practicable compensatory mitigation is required for the unavoidable impacts that remain.

The purpose of compensatory mitigation is to replace those aquatic ecosystem functions that would be lost or impaired as a result of a Corps authorized activity. The type and amount of compensatory mitigation required will be commensurate with the nature and extent of the activity's adverse impacts on aquatic functions. It is important to recognize the difference

between functions (those attributes that would be performed by the aquatic system) and values (the importance of the aquatic functions performed to society). Aquatic functions may include, but are not limited to, nutrient recycling, sediment deposition, recharge/discharge, flood water storage, erosion control, habitat for rare species, endangered species or native plant and animal species and production of food, fiber, and timber. Values which may be conferred because of these anticipated functions include improved water quality, flood control and non-consumptive or consumptive recreational uses.

Compensatory mitigation may include the restoration, enhancement, creation, and/or preservation of streams, wetlands and other aquatic resources. **Restoration** is the manipulation of the physical, chemical, or biological characteristics of a former or substantially degraded wetland, stream or other aquatic resources to return natural and/or historical functions; **Enhancement** is the manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific functions or to change the growth stage of composition of the vegetation present, and may include converting the site to a less destructive land use; **Creation** is the establishment of a wetland or other aquatic resource where one did not formerly exist; and **Preservation** is the legal and physical protection of existing ecologically important streams, wetlands and/or other aquatic resources for an extended period of time, usually in perpetuity. Restoration and enhancement are generally preferred to creation because these actions are normally less expensive to implement, less prone to failure, and less likely to adversely affect existing valuable upland habitats.

Compensatory mitigation should generally be "in-kind" and occur as close to the site of the adverse impact as practicable in order to minimize losses to the local aquatic ecosystem. However, out-of-kind and/or off-site compensation may be appropriate when compensation either cannot reasonably be conducted in kind and/or at the impact site or would be more beneficial to the aquatic ecosystem if conducted out-of-kind or at another location. If in-kind/out-of-kind mitigation can not be accomplished on-site or off-site and all possibilities have been exhausted the applicant may use a mitigation bank or participate in an in-lieu fee arrangement if those opportunities are available.

Mitigation banking involves a formal administrative framework in which aquatic resources are restored, enhanced, or established, expressly for the purpose of providing compensatory mitigation in advance of authorized impacts to similar resources. Banking is characterized by transfer of the legal and financial responsibility for executing compensatory mitigation from the permittee to a third party – the bank sponsor. A mitigation bank is developed and operated pursuant to the provisions of a mitigation banking instrument that are mutually agreed to by the bank owner, the Corps and other natural resource agencies. For further information on mitigation banking, refer to "Federal Guidance for the Establishment, Use and Operation of Mitigation Banks," published in the Federal Register on November 28, 1995 (Vol. 60, No. 228, pp. 58605-58614).

In-lieu fee is a mitigation system that provides permittees an opportunity to pay a fee in lieu of conducting project-specific mitigation. Fees are used to fund projects that are designed to restore, enhance, create or preserve aquatic ecosystem functions. In-lieu fee systems provide a team of resource agencies the opportunity to review potential projects and allow for the appropriation of monies for specific mitigation activities. For further information on in-lieu fee mitigation, refer to "Federal Guidance on the Use of In-Lieu Fee Arrangements for Compensatory Mitigation under Section 404 of the CWA and Section 10 of the Rivers and Harbors Act" dated October 31, 2000, and published in the Federal Register on November 7, 2000 (Vol. 65, No. 216).

The Huntington District is soliciting comments from the public; Federal, State and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluated these proposed compensatory mitigation guidelines. Any comments received will be considered by the Corps of Engineers. Comments on these proposed guidelines should be submitted, in writing, within 30 days to:

U.S. Army Corps of Engineers
ATTN: CELRH-OR-F Public Notice No. 200400008
502 Eighth Street
Huntington, West Virginia 25701-2070

It is the Huntington District's intention to coordinate with other Corp Districts within each state that the Huntington District shares regulatory responsibility to develop statewide or regional guidance. Additional information concerning these mitigation guidelines may be obtained by contacting Mrs. Sarah Workman of the Regulatory Branch at 304-399-5710 or 304-399-5210.

Ginger Mullins

Ginger Mullins, Chief
Regulatory Branch

(W,K,O)

Compensatory Mitigation Guidelines
Huntington District

I. Goals and Objectives

The goals of mitigation must be clearly stated in the mitigation plan. The basic purpose of compensatory mitigation is the functional replacement of wetland or stream functions and values that are lost through construction of a permitted activity. Typically the objective is to provide a minimum of 1:1 functional replacement, i.e. no net loss of functions, with an adequate margin of safety to reflect anticipated success (Note: Individual state requirements may differ). In some cases, replacing the functions provided by one wetland or stream area can be achieved by another, smaller area. In other cases, a larger mitigation ratio may be needed to adequately replace the functions of those aquatic resources being impacted by development. All goals of a mitigation site must be specific, measurable, and attainable within a specified timeframe. Address the objectives in terms of the water regime, vegetation structure, and habitat features to be restored, created, or enhanced.

II. Baseline Information

A. Provide the names, titles, addresses, and phone numbers for each of the following responsible parties:

1. Applicants.
2. Preparers of proposed mitigation plan.
3. Parties having financial responsibility for the attainment of the performance standards required by the proposed mitigation plan.
4. Present owner of the proposed mitigation site.
5. Expected long-term owner of the mitigation site.
6. Parties responsible for long-term maintenance of mitigation site.

B. Provide the location of project including the following:

1. An USGS map depicting the geographic relationship between the proposed impact site(s) and the proposed mitigation site(s).
2. Latitude/Longitude of proposed impact and mitigation site(s) in decimal format (for GIS use).
3. Road map of site location with road names, highways, and other features clearly indicated.

C. Description of overall project including size, type, functions and amount of impact to aquatic and other resources.

1. Describe the size (i.e. acreage of wetlands/ponds, length of stream) and type of waters proposed to be impacted. This should be detailed and should provide such information as whether the wetlands are emergent, scrub-shrub, forested or a combination of two or more of these classes and stream classifications based on Cowardin or Rosgen techniques or other forms of stream classifications. All dominant plants (as determined by the 50/20 rule) in each of the vegetation stratums of a wetland should be identified.

2. Describe both site specific and landscape level wetland or stream functions and values at each impact site. The description of these provided functions are extremely important, as they will dictate the minimum functions that must be replaced at the proposed mitigation site.

3. For streams proposed to be impacted, complete and submit approved qualitative assessment forms as well as narrative description of stream substrate, length and width, number and type of riffle-pool complexes and in-stream vegetative cover.

4. For all waters proposed to be impacted, provide a detailed discussion of the existing surrounding upland buffers. This description should document the width of buffers, as well as the quality and denseness of buffers (i.e. are buffers composed of herbaceous, shrub or tree species? What is the percent cover of each of these vegetative strata?)

5. Data describing physical, chemical and biological characteristics of the waters proposed to be impacted. This information should include, but is not limited to, sediment loads present in the stream, levels of contaminants and species diversity of invertebrates and vertebrates.

D. If the project involves mitigation in the form of watercourse relocation, creation, or enhancement, the following information should be submitted, depending on the magnitude of the project.

1. Plan view and section view drawings of existing conditions, and longitudinal profile.

2. Assessment of stream (is it aggrading, degrading, migrating excessively, excessive erosion, too much sediment in system, etc)

3. Length of project reach.

4. Total cut and fill needed to reconfigure or create new channel.

5. Total rock fill used for habitat/stabilization structures.

6. Proposed plans, including plan view, section view at riffles and pools, and longitudinal profiles of stream reach.

7. Location and detail drawings for habitat/stabilization structures.

8. Radius of curvature, bed material type, sinuosity, valley slope, stream slope, thalweg details, pool to pool spacing, width to depth ratios, and other technical measurements or ranges, including watershed size and discharge of stream.

9. Drawing outlining buffer around stream and planting plan if necessary.

10. Plans to control water during construction.

11. A description of the construction sequence.

12. Photographs of the stream in its current state, including upstream and downstream areas.

13. Monitoring includes as-built, going through stream classification measures to ensure it's appropriate type, monitoring conditions up and down stream and in reach, vegetation success, fisheries data when appropriate, etc.

III. Mitigation Site Selection & Justification

A. Describe location, including rationale for choice of mitigation site. Indicate distance from project site, if offsite. Indicate if in/out of the same watershed as project.

B. Ownership Status

1. Indicate who presently owns the proposed mitigation site. Availability of property must be clearly defined prior to final review. All easements and/or encroachments located on the proposed mitigation site must be identified. The mitigation site should be owned by the applicant prior to issuance of the Corps permit.

2. Indicate expected ownership of the mitigation area following completion of the mitigation project. The responsible party for long term management and protection of the area must also be identified. A signed management agreement must be submitted if an entity other than the applicant will assume management responsibilities following completion of the mitigation project. Include copies of any agreements and all applicable deed restrictions.

3. Indicate what entity, if any, controls the water flow and the water control structures to and/or from the site. Arrangements must be made by the applicant that guarantees appropriate water flow in the mitigation area during and after the establishment of the mitigation project. The agreement must be in writing and submitted to the Corps for review.

4. Indicate who the point of contact is for permission to gain access to the site, or include a statement giving the Corps right of access to the site.

5. A conservation easement or deed restriction may be required that maintain on-site and off-site mitigation and preservation areas as wetland preserve and wildlife habitat in perpetuity. Copies of the proposed language will need to be submitted to the Corps of Engineers for approval prior to recordation. Copies of the recorded documents should be provided to the Corps no later than 60 days subsequent to recordation. Recordation must occur prior to the start of project construction.

C. Present and Proposed Use of Mitigation Area.

Briefly describe all known present and proposed uses of mitigation area, including any easements. Discuss non-native landscape plantings, pipelines, power lines, roads, distance and location of nearest structures, if any, etc. on property containing mitigation site. Discuss use of mitigation area after project is complete.

D. Present and Proposed Uses of All Adjacent Areas.

Briefly describe known present and proposed uses of all property sharing a common border with the property containing the mitigation site.

E. Zoning.

Describe present and proposed uses consistent with the local general plan and zoning, if applicable, for mitigation site and adjoining properties, including city, county, special constraints, etc.

F. Out-of-Kind Mitigation.

Mitigation using lakes, ponds, or impoundments will generally not be acceptable as compensatory mitigation for adverse impact to wetlands. Additionally, mitigation using wetlands, lakes, ponds, or impoundments will generally not be acceptable as compensatory mitigation for adverse impacts to riverine systems. However, mitigation using lakes, ponds, and impoundments may be allowed as compensation for impacts to similar water bodies.

IV. Mitigation Work Plan

A. Rationale for Success.

Give the rationale for expecting implementation success. Refer to previous relevant experience of applicant and/or consultant and to other similar and successful mitigation projects. Include hydrology and soils information. Describe appropriateness of site, methodologies, and materials to be used. Describe how this plan may affect wetlands or streams already present on the site.

B. Responsible Parties.

The wetland or stream mitigation work should be designed and constructed by a person or company with documented success in the type of stream or wetland creation, restoration or enhancement required in the mitigation plan.

C. Site Preparation

- Describe plans for grading, hydrologic changes, water control structures, soil amendments, erosion control, bank stabilization, equipment and procedures to be used, site access control, etc, as applicable. Include a description of exotic vegetation control techniques, planting hole excavation methods (e.g., auguring, hand digging) and the size of the planting-hole (e.g., twice size of container). Describe disposal of excavated soil from mitigation site.
- Provide base topographic maps showing planned site preparation (see for figure format information).
- Provide representative cross-sections of mitigation site with elevations and scale indicated.

D. Construction Methods.

We *recommend* the following construction methods and best management principles be incorporated into the mitigation work plan.

(1) High-visibility hazard fencing shall be constructed along the wetland boundary adjacent to the project, to keep construction materials and equipment out of the wetland area and to protect the remaining wetland from further impacts.

(2) Work in wetlands shall be conducted during late summer, after spring run-off, when the soils have dried out to avoid sediments washing downstream.

(3) Avoid stockpiling material in wetlands, outside the permit area. A construction barrier fence shall be built around each permit area to prevent equipment from

disturbing wetland soils or removing wetland vegetation that is not permitted to be filled.

E. Planting Plan.

Prior to project construction, where practicable, permittee should salvage desirable wetland plants that are located in the project area. These wetland plants should be transplanted into the mitigation wetlands, to speed up wetland development.

- Briefly describe planting plan and methods.
- If transplanting is to be done, describe storage method and duration.
- Describe any expected volunteer native revegetation that is included in mitigation planning.
- If a planting plan is proposed, a list of species identified by scientific name and wetland indicator status should be submitted.
- Provide a detailed description of what species would be established in each varying wetland zone (i.e. Short-term saturation, long-term saturation, draw-down zone and permanently flooded zone.) It is very important that your proposed species establishment coincide closely with the proposed hydrologic conditions in each zone of the wetland mitigation area.
- Indicate the source of seeds or bare root plants. It should be noted that container-grown plants are not recommended.
- A plan view depicting proposed locations of planted stock should be submitted.
- If herbaceous species are to be established, provide the proposed planting density. If uniform coverage is desired, herbaceous stock should be proposed to be planted in densities not less than the equivalent of 3 feet on center for species that spread with underground roots and 2 feet for species that form clumps.
- A control plan that describes the strategy to control, or recognize and respond to the invasion of exotic vegetation should be included.

F. Soils.

In created wetlands, prior to project construction, permittee shall salvage wetland hydric soils that are located in the project area. These wetland soils shall be used to line the mitigation wetlands, to provide a soil medium for wetland vegetation.

G. Buffers.

Permittee shall create and maintain an undisturbed vegetative buffer between the upland/wetland interface, to maintain the integrity of the wetlands on the property and minimize disturbance to wildlife. In the case of stream mitigation, the permittee will often be required to provide a buffer zone. Width of buffer zones on these cases will vary depending on the project and protected resource. The mitigation plan should include the species of trees proposed to be planted and the proposed planting density.

V. Performance Standards

A. Performance standards are a list of the criteria that will be evaluated to determine whether the mitigation will be considered successful. Fulfillment of the performance standards should indicate whether the mitigation is progressing well toward establishing the habitat type, functions and values which constitute the mitigation goals and objectives. The applicant is strongly encouraged to link the mitigation goals and objectives with the performance standards. The performance standards should be stated in such a manner that the Corps can return to the site for a compliance check and verify attributes (e.g. measure percent cover) of the target functions and values.

B. Sample performance standards follow:

(1) ____ acres of emergent/shrub wetlands shall be created to offset the project impacts, within 3 years of the date of this permit. The applicant must demonstrate that the required jurisdictional area of wetlands or waters of the United States have been created. The Corps will verify that the created acreage conforms with permit requirements as a part of final success criteria.

(2) Willows shall be planted at a minimum density of ___ live stakes per _____ feet of bank, along each side of the creek. Success will be achieved when 80 percent of the willow plantings survive after 3 years from planting.

(3) Native grasses and forbs shall be planted along each side of the creek. Success will be achieved when 80 percent of the bank is covered with herbaceous plantings 3 years after planting/seeding.

(4) The mitigation site shall be preserved in perpetuity as a conservation easement managed by a third party with proven experience in such management. A copy of the conservation easement agreement shall be submitted to the Corps for approval, prior to beginning the work authorized by this permit.

(5) _____ acres shall be planted with native Carex plugs spaced at no greater than 2 feet from center to center. The plugs may be taken from existing wetland areas, provided plug removal does not reduce existing plant cover below 80 percent measured within a meter square plot.

(6) A wetland delineation, prepared using the 1987 Corps of Engineers Wetland Delineation Manual, shall be prepared to document that mitigation wetlands have been created.

(7) Hydrology shall be designed to be self-sustaining.

(8) Dominant species in mitigation wetlands shall be _____.

(9) Grazing shall be permanently eliminated in enhancement areas by installing and maintaining fencing to exclude livestock. Fences shall be installed and maintained.

C. Factors to be evaluated for determining performance standards:

- Target Functions and Values
  - percent vegetation cover by strata and/or density
  - target native plant species diversity and composition (if monitoring indicates a high level of non-native species diversity, corrective action will be required)
  - approximate plant height and diameter at breast height (dbh) (shrubs and trees)
  - evidence of natural reproduction (seed viability, etc.)
  - percent survivorship and other quantitative measures of success
  - dominance of target species within created wetlands.

- Target Hydrological Regime
  - source(s) of water
  - discharge points
  - areas affected by seasonal flooding
  - direction(s) of flow
  - size (and map) of watershed
  - duration, periodicity, and depth of ponding/flooding
  - water quality (i.e. salinity, pH, dissolved oxygen, temperature, etc)
  - sediment transport

- Site Integrity
  - Erosion into or within protected, restored, or created wetlands
  - Human disturbance (trash dumping, off-road vehicles, etc.)

VI. Site Protection and Maintenance

A. Long-term legal protection instruments are encouraged for most mitigation sites.

(1) For larger impact projects, the permittee shall preserve and protect the mitigation sites in perpetuity. Prior to beginning project construction, the mitigation site shall be designated as a conservation easement that is managed by a third party, such as an environmental group with proven experience in such management. The Corps cannot be the holder of a conservation easement. A copy of the signed conservation easement agreement should be submitted to the Corps for approval, prior beginning the work authorized by this permit. The document should prohibit dredge or fill activities in the mitigation site and prohibit domestic livestock grazing, wholesale spraying of herbicides, mowing, and tree and shrub

cutting other than selective pruning. The agreement shall require fencing be maintained to prevent livestock from entering the mitigation site.

(2) For smaller impact projects, deed restrictions, covenants or other mechanisms to protect the mitigation site in perpetuity should be recorded with the county recorder and submitted to the Corps of Engineers within 60 days of the date of the permit, for approval. The document should prohibit dredge or fill activities in the mitigation site and prohibit domestic livestock grazing, wholesale spraying of herbicides, mowing, and tree and shrub cutting other than selective pruning. The document should also identify a group, such as a homeowners association, land trust or government agency that agrees to enforce these prohibitions and protect the mitigation site. In some cases, the permittee or landowner may assume these duties.

B. Maintenance activities.

Describe planned maintenance activities, including plant replacement, non-native plant control, water structure inspection, fertilization, erosion control, herbivore protection, trash removal, and/or any other such activities. Include protective measures such as signs, easements, land use management, and access control.

C. Schedule.

Provide a table showing schedule of maintenance inspections.

VII. Monitoring Plan

A. Annual mitigation and monitoring reports shall be submitted to the Corps. They shall assess both attainment of performance standards and compliance with the permit. They should describe progress to date and include monitoring results from control areas, if applicable. Annual reports shall include the following:

(1) Analysis of all quantitative monitoring data (success, failure, and remedial action). Graph and table format is preferred.

(2) Photos shall be taken during each monitoring period. They shall be taken from the same vantage point and in the same direction every year, and shall reflect material discussed in the monitoring reports. When percent cover estimates are made of herbaceous vegetation, photographs should be taken of sampling quadrants or transects.

(3) Maps identifying monitoring areas, transects, planting zones, etc., as appropriate.

(4) Results of any qualitative monitoring of site characteristics, functions, and values.

(5) Report on degree to which performance standards were met.

(6) Suggested changes for monitoring and maintenance activities with rationale for change.

(7) Suggested remedial activities for characteristics functions, or values that do not meet the success criteria.

B. Timing.

The first monitoring report will generally be due 1 year after completion of mitigation construction. The site will be monitored for a minimum of five years and monitoring reports will be required to be submitted yearly to the Corps. Failure to submit monitoring reports constitutes permit non-compliance.

C. Notification of Completion.

When the initial monitoring period is complete, and if applicant believes final performance standards have been met, applicant shall notify the Corps when submitting the annual report that documents this completion. Where appropriate, a current delineation of the mitigated wetland area or stream should be submitted with the report (copies of all field data sheets should be available). Following receipt of the report, the Corps may require a site visit to confirm the completion of the mitigation effort and any delineation.

VIII. Adaptive Management Plan

A. Non-compliance.

If a performance standard is not met for any portion of the mitigation project, the permittee shall prepare an analysis of the cause(s) of failure and, if determined necessary by the Corps, propose remedial action for approval. If the mitigation site has not met the performance criterion, the responsible party's maintenance and monitoring obligations continue until the Corps gives final project confirmation. Permittee shall indicate what funds will be available to pay for planning, implementation, and monitoring of any contingency procedures that may be required to achieve mitigation goals.

IX. Financial Assurances

A. Financial assurances may be in the form of performance bonds, irrevocable trusts, escrow accounts, casualty insurance, letters of credit, or other approved instruments.

B. Financial assurances should be commensurate with the level of impact and the level of compensatory mitigation required. Financial assurances should be sufficient to cover contingency actions such as a default by the responsible party, or a failure to meet performance standards.

APPENDIX A – DEFINITIONS

Adjacent – bordering, contiguous, or neighboring. Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands."

Corps of Engineers Wetlands Delineation Manual - Environmental Laboratory. (1987). Technical Report Y-87-1 with electronic updates, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS. Web site: http://www.wes.army.mil/el/wetlands/pdfs/wlman87.pdf

Creation – the construction and establishment of a self-sustaining wetland of native hydrophytic plant species, and associated native wildlife, where uplands had previously existed.

Delineation – the process of determining the limits of wetlands using the Corps manual. It documents the location and extent of the wetlands with the field data supporting the placement of its limits.

Functions – The hydrological and biological characteristics of wetlands including: (1) habitat for fish, migratory birds and other wildlife, in particular at risk species; (2) protection and improvement of water quality; (3) attenuation of water flows due to flooding; (4) the recharge of ground water; (5) protection and enhancement of open space and aesthetic quality; (6) protection of flora and fauna; (7) sediment retention; and (8) nutrient export.

Growing season - The portion of the year when soil temperatures at 19.7 in. below the soil surface are higher than biologic zero (5 °C). For ease of determination this period can be approximated from climatological data given in most Soil Conservation Service (now called Natural Resources Conservation Service) county soil surveys (usually in Table 2 or 3 of modern soil surveys). The growing season starting and ending dates will generally be determined based on the 28 degree F or higher air temperature threshold at a frequency of 5 years in 10.

Hydric soil – soil that was formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part. The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the concept of *hydric soils*. Also, soils in which the hydrology has been artificially modified are hydric if the soil, in an unaltered state, was hydric. Some series, designated as hydric, have phases that are not hydric depending on water table, flooding, and ponding characteristics.

Hydrophytic vegetation - The sum total of macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. When hydrophytic vegetation comprises a community where indicators of hydric soils and wetland hydrology also occur, the area has wetland vegetation.

Mitigation – includes avoiding, minimizing, rectifying, reducing, or compensation for resource losses. This guidance policy focuses on restoration and creation of self-sustaining wetlands.
Native – species known to be historically natural and present at the location and habitat prior to mans' introduction of species to the area from other geographic sources.

Non-native – also referred to as alien, exotic or invasive species, refers to organisms that are not native to the geographic location and habitat. There is no component of harmfulness included, although non-native species often are harmful to the native populations.

Performance Criteria – Observable or measurable attributes which are used to determine if a compensatory mitigation project meets its objective.

Restoration – means to re-establishing a setting or environment in which the natural functions of the pre-existing wetland recover.

Species evenness – the number of different plant species present at a site.

Species richness – a mathematical derivation that quantitatively describes the species diversity present on a sampling site.

Values – the social worth placed upon the wetlands functional characteristics, including: (1) habitat for migratory birds and other wildlife, in particular at risk species; (2) protection and improvement of water quality; (3) attenuation of water flows due to flooding; (4) the recharge of ground water; (5) protection and enhancement of open space and aesthetic quality; (6) protection of flora and fauna, which contributes to the Nation's natural heritage; and (7) contribution to educational and scientific scholarship.

Waters of the United States (definition is subject to modification) – include:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
    i. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
    ii. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    iii. Which are used or could be used for industrial purpose by industries in interstate commerce;

4. All impoundments of waters otherwise defined as waters of the United States under the definition;
5. Tributaries of waters identified in paragraphs (a)(1)-(4) of this section;
6. The territorial seas;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1)-(6) of this section.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) that also meet the criteria of this definition) are not waters of the United States.

Wetlands – means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.